



1: Z46940. Homo sapiens PRM1...[\[gi:8217328\]](#) [Links](#)

http://www.../query.fcgi?cmd=Retrieve&db=nucleotide&list_uids=8217328&dopt=GenBan 10/21/2002

```

repeat_unit      76..357
                  /rpt_family="alu"
                  /label=a1f
repeat_region    847..979
                  /standard_name="alu"
                  /note="alu-element left arm"
                  /rpt_family="alu"
                  /rpt_unit=1..132
                  /label=a21fa
repeat_unit      980..1259
                  /rpt_family="alu"
                  /label=a2f
gene             1724..1969
                  /gene="PRM1"
CDS              join(1724..1835,1926..1969)
                  /gene="PRM1"
                  /codon_start=1
                  /product="protamine 1"
                  /protein_id="CAA87065.1"
                  /db_xref="GI:886876"
                  /db_xref="SWISS-PROT:P04553"
                  /translation="MARYRCCRSQSRSRYRQQRQSRSSRRRRSSCQTRRRAMRCCRPY
RPRCRRH"
exon             1724..1835
                  /gene="PRM1"
                  /number=1
                  /label=P1E1
intron           1836..1925
                  /gene="PRM1"
                  /number=1
                  /label=pli
exon             1926..1969
                  /gene="PRM1"
                  /number=2
                  /label=pie2
3'UTR            1970..2107
                  /label=plutr3
repeat_unit      complement(2291..2568)
                  /rpt_family="alu"
                  /label=a3r
repeat_unit      complement(3666..3950)
                  /rpt_family="alu"
                  /label=a4r
repeat_unit      complement(4140..4414)
                  /rpt_family="alu"
                  /label=a5r
repeat_unit      5368..5645
                  /rpt_family="alu"
                  /label=a6f
gene             6595..7066
                  /gene="PRM2"
CDS              join(6595..6865,7029..7066)
                  /gene="PRM2"
                  /codon_start=1
                  /product="protamine 2"
                  /protein_id="CAA87066.1"
                  /db_xref="GI:886877"
                  /db_xref="SWISS-PROT:P04554"
                  /translation="MVRVYRVRSLSERSHEVYRQQLHGQEQQGHGQEEQGLSPEHVEVY
ERTHGQSHYRRRHCSRRLHRIHRRQHRSCRRRKRRSCRHRRRHRRGCRTRKRTCRRH
"
exon             6595..6865
                  /gene="PRM2"
                  /number=1
                  /label=p2e1
3'UTR            6747..6994
                  /gene="PRM2"
                  /label=p2utr3

```

```

intron      6866..7028
            /gene="PRM2"
            /number=1
            /label=p2i
exon        7029..7066
            /gene="PRM2"
            /number=2
            /label=p2e2
repeat_unit complement(7944..8222)
            /rpt_family="alu"
            /label=a7r
gene        9361..9672
            /gene="PRM3"
CDS         9361..9672
            /gene="PRM3"
            /codon_start=1
            /product="protamin 3"
            /protein_id="CAB92526.1"
            /db_xref="GI:8217329"
            /translation="MGSRCAKLNTGQSPGHSPGHSTGHGRGHESMKKLMACVSQDNF
SLSSAGEEEEEEEEEEEEEKEELPVQGLLLLLEPERQEEGQKDNAEAQQSPEPKQTP
S"
repeat_unit 11765..12050
            /rpt_family="alu"
            /label=a8f
gene        13671..14935
            /gene="TNP2"
CDS         join(13671..14070,14919..14935)
            /gene="TNP2"
            /codon_start=1
            /product="transition protein 2"
            /protein_id="CAA87067.1"
            /db_xref="GI:886878"
            /db_xref="SWISS-PROT:Q05952"
            /translation="MDTQTHSLPITHTQLHSNSQPQSRCTRHQCOTFSQSCRQSHRGS
RSQSSSQSPASHRNPTGAHSSSGHQSPNTSPPPKRHKKTMTNSHSPMRPTILHCRC
PKNRKNLEGKLLKKKMAKRIQQVYKTKTRSSGWKSN"
exon        13671..14070
            /gene="TNP2"
            /number=1
            /label=TNP2e1
intron      14071..14918
            /gene="TNP2"
            /number=1
            /label=TNP2i
3'UTR      14612..14731
            /gene="TNP2"
            /label=TNP2utr3
exon        14919..14935
            /gene="TNP2"
            /number=2
            /label=TNP2e2
repeat_region complement(15549..15676)
            /note="alu-element right arm"
            /rpt_family="alu"
            /label=a91er
repeat_region complement(15692..15841)
            /note="alu-element right arm"
            /rpt_family="alu"
            /label=a92er
repeat_region complement(16045..16190)
            /note="alu-element left arm"
            /rpt_family="alu"
            /label=a93ar
repeat_unit complement(16361..16639)
            /rpt_family="alu"
            /label=a9r
gene        26670..28406

```

```

/ gene="SOCS-1"
exon      26670..26768
/ gene="SOCS-1"
CDS       join(26695..26768,27319..27367)
/ gene="SOCS-1"
/ note="ORF1 bicistronic SOC-1"
/ codon_start=1
/ product="suppressor of cytokine signalling protein"
/ protein_id="CAB92527.1"
/ db_xref="GI:8217330"
/ translation="MRESRPGAPRSPPPSRPRVPRPAASAPPDAMAHPSGWPLL"
intron    26769..27318
/ gene="SOCS-1"
exon      27319..28406
/ gene="SOCS-1"
CDS       27369..28004
/ gene="SOCS-1"
/ note="ORF2 bicistronic SOC-1"
/ codon_start=1
/ product="suppressor of cytokine signalling protein"
/ protein_id="CAB92528.1"
/ db_xref="GI:8217331"
/ translation="MVAHNQVAGDNAVSTAAEPRRRPEPSSSSSSSSSPAGPARPRPCPA
VPAPAPGDTHFRTRSHADYRRITRASALLDACGFYWGPLSVHGAHERLRAEPVGTFL
VRDSRQRNCFALSVKMASGPTsirVHFQAGRfHLDGSRESFDCLFELLEHYVAAPRR
MLGAPLRQRRVRPLQLQLFRQIRIVATVGRENLRIPLNPLVLRDYLSSFPFQI"
BASE COUNT      6869 a   7682 c   7506 g   6475 t       3 others
ORIGIN
1  cacagctttt  cgtgtttgca  attgagctga  aagtcaggta  acataaaata  catcatttta
61  aagtgtgtaa  ttcaaggcca  ggtgtggtgg  ctcatgcctg  taatcccagc  actttgggag
121  gctgaggcgg  gcagatcact  tgaggtcagg  agttcgagac  cagcctgacc  aacaagggtga
181  aaccccatct  ctactaaaaa  tacaaaaatt  ggccagggtg  ggtggcgggg  gtctgtaatc
241  ccagctactt  gggaggctga  ggcaggagaa  tcgctttgaa  gcaggaggcg  gagtttgag
301  tgagccaaga  ttgcgtcgct  gcactccagc  ctgagcgaca  gagcgacacc  ctgtcattcg
361  ttcattcaaa  attaaataaa  taaataaagt  gtgtaattca  gtggcattta  gtacagttac
421  aatgttgtgt  aaccaccgcc  tctatcaagt  tccaaagcat  cagcccacaa  ggaagcccc
481  caccatgga  cagctgctcc  ctgctccacc  cgccctgggtc  accccgatca  ctttctgtct
541  ccacggatcc  cctgctgcct  ggccctgcat  agaaacagaa  ctgcacatcc  tgcaccgcct
601  cagaacagtt  gcaggagcag  ctctttcttc  ccaggtgctc  ctccctcctc  ttactatagc
661  atccatttag  ggttcacttc  gccagcacc  ctttggtctc  ccctagagcc  tcacctgagg
721  tcaagttctc  ccagcacata  tcttcagaa  cccgaggttt  ccattatcag  catttgtcac
781  tattacaatt  attcttcagg  gctgtttcat  tcatgctttc  tgtagttaga  ttataaagtc
841  tattaggggc  aggggtgtgt  ggctcatatc  tgtaatccca  gtgctttggg  aggcagaggg
901  aggagatttg  ctcaagggtc  ggagtttgag  accagcctgg  gcaacatagg  gaaagcccg
961  ctctacaaat  aataataatg  gccaggcacg  gtgctcatgc  ctgtaattcc  agcactttgg
1021  gaggctgaga  cgggcagatc  acttgaggtc  aggagttcga  gaccaagcct  ggccaacatg
1081  gcgaaacccc  atctctacta  aaaatacaaa  aattagttga  gtgtggtggt  gcatgtctgt
1141  agtccaacta  ctgggaggct  gctggccaga  ggtttgcttg  aaccaggag  gcagaggttg
1201  cagttagcca  agattgcgct  actgcactcc  agcctgggtg  acagaatgag  actctgtctc
1261  aaaaaataaa  acaaatacat  aagtaattaa  aaaaaataaa  taataataat  aatacttctt
1321  aacaaggctg  tctgtcttgt  ttatcactat  ataccaggcc  taggcaaaa  tccggaacag
1381  gccaaaatat  taacagtaat  attttgttaa  ttgaataact  agatgattgc  tcccacggag
1441  gactcatctt  gtatcgcccc  agctgtgaca  taggcagccc  ctacactcgg  gggcctgccc
1501  gcctctcaaa  tgcccatata  tggacatgat  gcaggccacc  tggcatggtt  tggtaggttc
1561  agcccttttg  ccctcacaat  gaccaacggc  cccctggcat  ctataacagg  ccgcagagct
1621  ggcccctgac  tcacagccca  cagagttcca  cctgtccaca  ggttggtggt  ctacagcaag
1681  gtggtgcctt  gctctgagca  ttcagccaag  cccatcctgc  accatggcca  ggtacagatg
1741  ctgtcgcagc  cagagccgga  gcagatatta  ccgccagaga  caaagaagtc  gcagacgaag
1801  gaggcggagc  tgccagacac  ggaggagagc  catgagtaag  tgggccagc  tgagggtggg
1861  ctgggctgag  gctgggagct  ctcagggcc  agccttcttc  tcaccacttt  tcttggtctc
1921  accagggtgc  tgccgcccc  ggtacagacc  gagatgtaga  agacactaat  tgcacaaaat
1981  agcacatcca  ccaaactcct  gcctgagaat  gttaccagac  ttcaagatcc  tcttgccaca
2041  tcttgaaaat  gccaccatcc  aataaaaaatc  aggagcctgc  taaggaaaca  tgccgcctgt
2101  caataaatgt  tgaaaagtca  tcccactctt  ctctccttgt  tcttgagagg  ggaggctcag
2161  tggggaggag  ggctcgggga  tgagcagagg  gggagagggc  ctgggcatgc  aacgggagaa
2221  agatgtcggg  gggggggaca  tgaaagacag  ttgtcacgct  gggttttgtt  ccaaactttt
2281  tttttttttt  gagacagagt  ctgcgtccgt  cgccaggatg  gagtcagtgg  ccatcttggc
2341  tactgcaag  ctccgcctcc  caggttcact  ccattctgct  gcctcagcct  cccgagtagc

```

2401 tgggactaca ggtgcccgcc accacacctg gctaattttt ttgtattttt agtagagacg
2461 gggtttctact gtgttagcca ggatggtctc gatctcctga cctcatgatt cactgctc
2521 ggctcccaa agtgctggga ttacaggcat gagccactgc acctggccat tgttccaaac
2581 tcttagtagt accaacaagt cacaacccaa acctgcctcc ctaagataca acaagaacca
2641 gtctcccaag tcacaaccag aacctgcctc ctaaacctct taacagatcc taccagtg
2701 gttgactcta gccaggctct cgagtttgag gacctactgt gttacatttc occacctct
2761 gacctttggt gacctactt ggcagcttga aaatggacca atggagtatt tacagaaatc
2821 agcaaatctgt acaaatctgt gttccctcca tcccaggaac cccaaagcca gttaaacatt
2881 taccagctgg agctcaagat tgaaccagct catcccatct gacctgtccc actgtgtccc
2941 acccggtttt atttcagccc aaagctgaaa tttcactctt caacaaagga actcttaggt
3001 tataacttaa atagattaa ccagtcacca tcaggaaaat taaattcaaa actgcttatt
3061 cctcactctg tgccagaagt tttcatccca tttgggtaca gagataactt gtccaggtag
3121 cagtggagct gaacttttca catttaatca agcaccatta aggaagtctc ttatctgcca
3181 tctgttaaac tcaaacattt ttgttaacca cgggtttctt tactctttgg ggcacgggtt
3241 cacaacgtta tgtccaccga agaaacaaag gttaaactgt ccatctggtc ggtactaagt
3301 ccacactcaa gctgcttgat ataccaccta tactaaaatt tctaaggcaa gagtttaaga
3361 cccagtgaga tctggggaag gacataagaa gtctgtctgg gcactggtct ccttggtcca
3421 cccacagcct aagaagccca cctctccgat tccttgacac aggcctggg tccagtcct
3481 ttctgtaggg tagagcaaac ccagagcatt ttggcagaga ccagaggctc tgagaccag
3541 ttccctgaag tgacagggcc caccagacac ctcaaaaatg tccagtagt actctgttt
3601 atgggacacc aactgtgtgc ctggtattct gcatacatca cttccttttt ttttttttt
3661 ttttgagaca aggtctcttt ctgtcaccca ggctagaata gactgcagta gcgcaaacac
3721 agttcactgc agcctcaaat ctctgagct caagtgattt ccttacctca gcctcctgga
3781 ctctgagta gctgggacca cagacatgca ccaccttgcc tggctaattt ttctaatttt
3841 tttgtagaga cgaggtctca ctatgttgcc caggtggtc tcaaactcct gggctcaagc
3901 gattctcctg ccttggcctc ccagagtgtc gtgattacag gcatgagcac tgcactacc
3961 tacggtgggt atcaacaacc atgttctttc aagttagcac atgagagtc atgtctagcc
4021 ctggcactac catgacctg atcacttagc aatgactccc cataacacac tccgatcatg
4081 acagcagctt ggctggacag gcagaccctg gtgtgccttt ttttttttt tttttttgag
4141 ataagggtct tgctctgtca cccaggtgg agtgcagtgg tgtgaacgtg gctcactgca
4201 gccttgatct gtgctcaagc aatcctccca tctcagcctc ctgagtagca ggaactacag
4261 gcacatgcca ccatggaccc aggtctattt ttttttttt tgtagacaga gccctcacta
4321 tgttgcccag ggtggtctca aactcctggg ctcaagtgat cttccacct cggcctctca
4381 aagtgtctgg attacaggtg tgagccacca ccccagccc cttcctatgt ttattttatt
4441 ttattttatt ttttttagac aggtttcgcc cttgttgccg aggtggagc gcaatggtgc
4501 catctcagct cactgcaacc tctgcctcct gggttcaagc aattctcctg cctcagcctc
4561 ctgagtagct ggggttacag cgcccgccac cactcccggc taattttgta tatttagtag
4621 agacaggttt caccatgttg actaggctgg tcttgaactt ctgacctcag ttgatccacc
4681 cgctcagcc tcccaaagtg ctacgattac aggtgtgagg gaccgagccc tgccccgccc
4741 cttcttattt tcatctgcaa gctttggcca tggagatttg acttagcgga cgtagggtaa
4801 ggctcagca ttcataattt taacacacgc cctcgaagag cttgagggcc atcataaagg
4861 accttgctta tccctaaaag agaggcaggg atagaaacac caagggcatg gcaatatcac
4921 ccatcacctc ctgtaaggat ctgaagatta agcctcctga atttgtttct tattggcact
4981 gtgacagatc atcacaaatt ttgtagcttt aaacaacata aatgcattat cttacaggtc
5041 tgcaggtcag aattctgaaa gaagtctcat ggggtctaaa tcaaggggtc agcagggctg
5101 tgttctcctt ggatgcacga ggggaggata acccatttcc ttgtccatcc cagcttctag
5161 aggcgcctg catcccttgg cttatagctc tccctccatc ttcaaagcca gcagtgtggt
5221 gtctccagct ttctcttctt gtgacctctc tacctcccta ttctctcttc taaggacctc
5281 cgtgactgca ctgggccaac ccagatcatc tgggatgac tctgcatctt caagctctta
5341 aatttgtgta tctgccacat tcccacatc tccctgcct ccatgaaagg gaaactggtt
5401 ttgcagtttc tgtgattctg atcccgact ttaatgggat catcaaagtt caatgagaag
5461 ccccgcaaaa ggccgagcgg gaggggagaa gatgaatatt ttggaggcgg agaggggagc
5521 attccctggg ctagggagga ggtggagagc caagggtagt actaaaacca ggctgtctcc
5581 gtctgaatgc tgccggcctg gccttctcag cagagtggcc ttgagcaact caactctctc
5641 atgctgtttt gcccacaga aaatgaggat tgtaaagtg aggaatgcaa ggtgtgtggc
5701 tcacacctgt aatcccagca ctctgggagg ccgacatggg aggtcactg aggcaggag
5761 tgtgagacca gccagggcaa catggtgaaa ccctatctat ctccacaaaa aatacaaaaa
5821 attagctggg agtggcagca cagcctata gtcccagcta ctgggaggct gaggtggcag
5881 gatcatctga gctggagggg tagaggctgc tatgatccat gattgcacaa ctgcactcca
5941 gctggggcga gagacagtgc ctcaaaacaa aaagaggaga gagagagaga tgagtagaga
6001 gagagagaga gagagagaat gagggaatgt atgggaaata aatgaatcaa tcttggcac
6061 actaggagct attagggaaac tgtttgtctg tgtttgccat cttaacagta agctgtgtgc
6121 acagagatcc aagcacggag tcttccaca tgggtgctgt ggcacagcag tgagttggca
6181 aggaagcttc caaatgacaa tgtgcgacc caccggcttg gggagatgag ggcttggatt
6241 aggcaataaa acacctgcca tctgtatggt tcacctactg caagagacag aggacatgct
6301 ttacaggcaa ggcaaggggg tctctgcctc tccagccct gcagcttggg tgccaggcc
6361 ctgctagtgt tgacctgtg cctgtgtctg ctcacagagg aggtctggga ggggtgggac
6421 tgggcggggc cgcagagtca tagtgggcgt ccccttttat atacaagctc cgggggagcc

```
6481 ttgcagacca gaccaacagt aacaccaagg gcaggtgggc aggcctccgc cctcctcccc
6541 tactccaggg cccactgcag cctcagccca ggagccacca gatctcccaa caccatgggtc
6601 cgataccgcg tgaggagcct gagcgaacgc tcgcacgagg tgtacaggca gcagttgcat
6661 gggcaagagc aaggacacca cggccaagag gagcaagggc tgagcccgga gcacgtcgag
6721 gtctacgaga ggacccatgg ccagtctcac tataggcgca gacactgctc tcgaaggagg
6781 ctgcaccgga tccacaggcg gcagcatcgc tcctgcagaa ggcgcaaaag acgctcctgc
6841 aggcaccgga ggaggcatcg gagaggtctg cctgcgcccc cgcttgccc tgcatgtccc
6901 tgaccacccc aggcacagga gggaggcggg gacccacccc acctgacaaa agctccagcc
6961 ccctaaaccc cgtccccacc cagagttccc taggtgaccc cctcaaccag aactttcttt
7021 cccaaaaggc tgcagaacca ggaagagaac atgcagaagg cactaagctt cctgggcccc
7081 tcacccccag ctggaaatta agaaaaagtc gcccgaaaaca ccaagtgagg ccatagcaat
7141 tcccctacat caaatgctca agccccagc tggaagttaa gagaaagtca cctgcccaag
7201 aaacaccgag tgaggccata gcaactcccc tacatcaaat gctcaagccc tgagttgccg
7261 ccgagaagcc cacaagatct gagtgaattt gagcaaaagtc acctgcccga taaagcttga
7321 caagacactc gctggcctgt cgggttttcc tttgcacgaa tcacacaaac ctggcttccc
7381 tcacgcccag ggcgggtaga ggcttctctg cagcccttcc tcagaggcag gtaggcgggg
7441 agtctgatgc tctcaggaca cctaggaga gggttactgt gcctgggagg ccaccctatg
7501 atgctgtcct gtctattgtg catccttcca tgggtgcaaa ggccacatta gtctgtctgg
7561 atccccctcc agtgaagaac ctgatcctac ctcatgaaag gagaaaaatg ttagaacaaa
7621 tcgagtccta attaatgac aaagatgcca aggcaccttg tggccatatt taaatgccta
7681 ctgtgtgcca cagtttaaaa aacacaaccc atcttgagtg ttgggtgggt ggaagtgtaa
7741 acgtgggggc agaggtgggg gcactgctca gtgcaggcca cagcttcgag gtgggaaaca
7801 ggtctggcat gctccagcaa caacttggtc agcacagaga cggcaaaagg caaggagtag
7861 atgaatgcag agtaatgggc tgcgctgtgt gaggcctgtg ctggctgaag ctctggagac
7921 ccaggcagaa tccgatcctt gttgctgtgt ctctcgccc tgtgtctgat cactcctccc
7981 tcctgtctga aatcaaggac ccttggtgatt gcactgaggg actttctgga caacccaaga
8041 taacctcccc atctcacaat ccttacatca taaattccag gatcaggaag ggggcacttc
8101 ggagagtgca accttagcca accatagcca ctgaggactg ggggataaga ctggcaagat
8161 ccaattccat atgttggaac atggatttct ggtgtcaga aatgaccaat ctttaggaag
8221 caacgagttt ctgaaaacaa aacaacaaca acaaaaaaaaa aacagacgga gtttcgctct
8281 tgtcactggg gcggtgtgca gtggtgcgat ctgggtcac tgcaacctgc acctcctatg
8341 ttcaactgat tctcctccct aacctcctga gtagtgaag gagctaaaca aatttttttt
8401 tttttttttt ttttggtatt ttagtaaag acagggtttc acgatgttgg ccaggctggg
8461 ctogaacttc tgacctcaga tgatctgcct gcctcgctc ccaaagtgtc gggattacag
8521 gtgtgagcca ccacgcctgg cctcaaaaat taatttaaaa taccattcga gtgtacaaac
8581 gactcatttc aatgtataaa agacaagtc ctaaaccccc ctcccccat cgtgaaattg
8641 tgctgcacag atgtggaacc ttgccaaagg gcagctccat gatgtcttct ctgtggccc
8701 aaaacactta agaggatgtc actccacctt gacctgggta gagtggcctc tgggtgggtg
8761 tgtccatctt gcatcagtca gggacaaagc aacctcttgt tcatcccagc ttggtttctg
8821 gcctgttccc atgccttggg caaacaaaca atgcttagga gccattgctt tcaagaaga
8881 tttcacactt tcaggccccg aaggaagagt tccaaggggt cctgagtttt atgagcttac
8941 agagtgcata cattttaagc acacagcttg atgatttatt tccaaggggt aacagtcag
9001 aaactcaaca gagacagctc tctcggctg gcgatttctg ggatgtgggg aggagctgt
9061 gtgtgcccct cctgcttcta gaaattcaat ccctaactcc catcccagct acaaggga
9121 ctttctccag ggcaaatgag gactatgggt tggcatccga actggcccca gtgtcagcc
9181 ttgcagacct cccctgtggc tgggagctgc cagtggctga ggtgtgagtt aactgttggc
9241 tcagacccag gttcccaggt ggggagggc tccctttgtg atgtcagcat cctgccccca
9301 ctcgagcccc cttcacccac cgcctcacct ccttgcccag agagacagc aacgtagacc
9361 atgggttccc gctgtgccaa gctcaacaca ggccagagcc caggccacag ccgagccac
9421 agcacgggccc atggccgggg ccacgaatcc tccatgaaaa agctcatggc ctgtgtgagt
9481 caggataact tctccttgtc atcagcgggc gaggaagagg aggaagagga ggaggagggg
9541 gaagaggagg agaaagaaga gctgccgggt gaggccagc agagccccga gcccaagcag
9601 cggcaggagg agggccagaa ggacaacgcc gaagggacgc ccactgtctg tccggcgaca
9661 acacctcctt gacctgcaac aaaaagtctc tgaggaatcc tccctgtctc tggttccctt
9721 gtgttcagag aagagtcaat cactgtgtga cgtgtgtgaa ggcgtgtgtg tgtgggtgca
9781 caccctatcc cttctggccc caaggaaggc tgaacagcaa ggctcggtga ccttgttccc
9841 cacggaggga ggccagctgc ggggctttga gaggggaatc atctccgcca aatcttccca
9901 aagccccagc cagaggttga ggggctttga cagcacacc ccagccgaga gcatccagcg
9961 tctctgggac gggaaattcc tctgcagtc cgcagtcctc actgtgtctg cccaactatg gaccgtcttt
10021 gacagggtaa ggccttgagt tcagcagacc tgggttcaaa cttcttttct ggtagctgcg
10081 taagaacact caagtactgc gtgtctttga gcctcaggct gccctccca gcgtttaggg
10141 tgcccttgag caagtactgc ggtcagatga tcagaaaaat tagctcaagt gatgggtggg
10201 gaagctaata gctactcatg gtgtcagagt aggcagggga ttgttctgtg ggtcatgggt
10261 accaggcctg gcaccagtca gtgtcagact ctccactgc cagtctatgc tgctggcaac
10321 gttcctctag gtccttcttg agctcactcc cgccttcttc aaggggtcta gctggggcg
10381 cacctgcacc cctacctgga agctcactcc cgccttcttc aaggggtcta gctggggcg
10441 gagacagtac cccatgagag cagtaggcaa aagaggccca gggaggcgac tgggtacaga
10501 cacagaacct agggcccatc ctctcgctct gggctcggtg cgccttccgc aaggagcttc
```

```
10561 ggagtgcgtc tgctgccac cctactgccg gtcctcctcc cactccttcc atcccaaaga
10621 agccacaaat gcatctcca ccacattccc tcacagtcct ccaagcacca gccaccttga
10681 gctaattctc tggatcagct gatccccgtg tcccagaggg atcctagtgt gtaccgtggc
10741 agtggggctg ggggatgggg aattttcagg gaagcctcgg tttctctggg ggccatgttt
10801 gacgtaggaa ggggccttgg gctaccctgt gggaggccac ggctctgccg gcaatggcct
10861 agggcaaggg aggcctgtta tccactactc ccagaccac aaatgactcg gttggtcagc
10921 cttgtccctt tgtccaaggg ccaaagggtc accacccat tcatgtgcc aggaacatg
10981 agctgagtc tttgttatcc ccacatggtg ctagtacaa ggagccctgg taataaaca
11041 tagtcccgtc gtccctggaga gagttcactg tcatgggtgc ggggcaggta cgtgacgtgc
11101 cgcacacccg ctgctgggag aggtcagccc tccctgggag gactggaaag gtgtgtggag
11161 gagaggctgg ttgatggcag gccacgatct ccattccagg ctatgtgctt caggatggga
11221 aagtggggcg ttggcagtg aggagcagga gaccatggga aggggggtcc agagaccacg
11281 agagtcttca cggcttggtc tagcatatac cccacaaccg gacctgctga ggccacccaa
11341 aggcaggccc ctgagaaccc tctgacagct gtccctctaa tcgccgagaa tcccttagtg
11401 acctcgagag gaggccagac ctgaatatga ctggctctgc cgtgatcggc taagggactc
11461 tgggctggtt actccacctc tctgagcctg ttccctcttt gctaaatgta atcatagtat
11521 ctgcctcatg gggcgcataa gtttcttggg gctgccatac caaatgacca caaacttggg
11581 ggctaaaaca acagaaatgt attctctgca gttctggagg ccagaagtct gaagtgcagg
11641 tgccagctgg gctgatctcc ctccggagcc ttagcagaga atccttccct gcctcctcta
11701 gctcatacaa ctccaagctc gtctccactc tcccatgggt tccctctctc cctgggtgac
11761 acctcttctg tctctcataa agacatttat cattggattt agggcccacc agtaagcca
11821 acatgcttat ctcaagattc ttagcttaat tacatctgca aagaccctt tccaaatatc
11881 acattgacaa gttctaggag ttataacgtg gacatagatt tttgggggtt gccattcatt
11941 ccactacaaa gggctactgt gaggtttgag ggcaaagctg cctggagagg gtaaggcca
12001 gagcccagcc acgtagaaag cattcagtaa atgaaagcag ttctcactgt aagaaatttg
12061 aaatgtttat taagaaataa actgcaaagg ctgggcataat tgctcatgcc acccttggca
12121 gcactttggg aggccaaaagc aggagaaaac cttgagctca tgagttcaag acccacctaa
12181 gcaacaaagt gagaccccat ctctacaaaa ataaaaataa aaaaattaga cagggtgtgt
12241 ggcattgcacc tgtatgcaca gctacttggg aggtctagggt gggaggatcg tttgagcca
12301 ggaggtggag gctgcagtga gctgtaattg tgccactgca ctctagccta ggccaacaca
12361 gcaaaaccct ttctcaaaag aaaaagaaaa agaaaaaac ttccataaaa tccactggat
12421 gcaaatcctc atagcaagag gcaaagttgc acatgggcag agtgagaggt tggcttgggc
12481 cggaggcctg ctcggggagg acagacagag acagaggaag ttccatgcag agagaagtgg
12541 gaaagtacag ggccaagggc taagcccaaa ggcacggcc aagacagga ggggtggagg
12601 gctctggatg gaaacccaaa gactagaaga tcaaatggct tagtgttcaa acataagtct
12661 gggctttctt ctagaggtagc tgggttatct gagcaggga ggcgtgattc aaacggaatg
12721 gcgaggtctt gttagcagga aggggaggag aatcaagag cagaaactga aggagagaga
12781 cgggtttcca agggcctcct gtacgttgac aggcattca aggcacagag ggctcacgag aataccagga
12841 aagaaggaaa gacacccctt tgtcacatag ggcaattaag cctcagaaac cacaatggcc
12901 tacccaagac tggacatcag tgcaaactgg gatttgaacc cggctctgaa tttcccgact
12961 ttagatctgg ctggggagggt aggcttgcaa gcgagcccag gaccacccct tgggtccatgt
13021 ggttactcat ctttcatcca tccaccaagc catctgacca attcatcacc tccccatcat
13081 ctgggcacta atcatctgtc tcaacaactg ccaccattc agctgccatc accagggtca
13141 gggctgcact cctggtaccc aagttgcccc ggcggttaag aaaaacacct gatgatgctg
13201 gtcagtcag tttactgagc tcttattgtg gctgggcctg agctaactgc ttgatataaa
13261 ttctctcctt tattaataat tcttccaatg tccgaatgag gtcagtacaa ttattatccc
13321 tattctgcag agatggggaa actgggactt gttcaggcga attcccaggg ctgacctgtg
13381 ggaaaaagca gatctgggat gcagactcag cttaatctga cccaagggtc cctacctga
13441 accagtagct gggactatcc ccagggtacc cttagagagt gcccagcct ggggtgaggg
13501 taaggggtag ggggctttgt cttggctgag ccacatctct cacaccctg tggcctgggc
13561 atcataatca gcccacta tataaccagg tgggcctgcc agggcctctg taaagctagg
13621 cctgctggga gaggatgagg aggaggccct gccctcaaac gtggcctcct atggacaccc
13681 agactcacag ccttccatc acccacctc agctccatag caactctcag ccccaaagcc
13741 gcacctgcac ccgcatcgc caaaccttca gccagagttg cagacagagc catcgtggca
13801 gccggagcca gagctccagc cagagcccgg ccagccaccg caaccacact ggagccaca
13861 gctcatccgg ccaccagagc cagagtccca acactagtcc accaccaaag cgccacaaaa
13921 agactatgaa ctcccaccac tctcccatgc ggcccaccat cctgcactgc cgctgcccc
13981 agaacagaaa gaacttgga ggcaagctga aaaagaaaaa aatggccaag aggatccagc
14041 aggtgtacaa aaccaagacg cggagctcag gtacccttta aggaggtggg gaagggccac
14101 cgagccacag atgatggaga gcagacctg ggggcagtga gaggaaggct gtcagcagg
14161 cacaaaggaa ccacaggcaa gaaggaagag ggagaagaga aacaatggca gttggctagc
14221 tgaatgtatg atacgttgac ggaaagtctt ctttgaaatt ggatgggttg attaggagga
14281 tggaaagatg gacagatagc agataagcta gatgaaagca tgaatggagt tgagaggttg
14341 ggttgatgac tgggtgggta aacaataaat aggttataga aaggatagtt ggaagaatgc
14401 attggtgaa tgaatggaag tttggatagc attagctgga tggatggata aatggatgaa
14461 tgcactggct ggctagttat ttggttgggt aggtagatga tcagtttgaa gattgtggtt
14521 ggtggatgaa ttggttagaa atagagttaa atagttgtag aagttttgat gggttggttt
14581 gattggttaa atattatctt aatagagtaa tatagagtaa ttgaataaac agagagaaga
```


14641	atagatatct	agactaatgg	gatagaatgg	gaaagaaatg	ttgaataaat	gaatggaatg
14701	agtgaactaa	tgaatgggtg	gatgacaaat	ggaaggggata	aatggatgga	tacctggatt
14761	cacataggtc	aaaggacact	gacggtagtc	taaactctat	ctatgtccca	tatcaatcac
14821	aaatgagtag	ttgtaagacc	ttacaggagg	tcaaggaggt	cactgacttc	atgaagtgt
14881	cagctattaa	aggttccctt	cccactctta	tcccttagga	tggaaatcca	actaatgaga
14941	ccgcactcct	tggcttggtc	ctgcgtgttt	cacccaaagg	agaaaatgct	aggatgaagt
15001	caatcttctt	gcaggaacat	gttactatgg	tgattttctac	gcaacactaa	ttaaagcttg
15061	tacctggaag	actatccctg	agtagtcata	gtcattttga	tttactaat	aaaggtgta
15121	tgtgttttgg	gggcctgcac	aggggcagaa	atgaatgggg	gtaggatgcc	aagaagcctg
15181	cagagtcac	tctgcttga	taacaatctt	ttgccctgta	tgtcccaca	tgggtgtgta
15241	cacatgtgga	cacacaagat	gcacacatgt	ccacaaccta	ttcacgtgat	ccacatgtat
15301	gtagcccaag	aacacgacag	gagacaggaa	gaggggttca	gaatgtgcct	tttgcaatcc
15361	agagcatcct	gagtttgaat	cctggctcat	ctttcgtact	cgctgtgtga	ccctggactg
15421	tgaccaacct	ctgagtctca	cttggtgtgc	tgtaacatag	taccaacctc	aacgttctca
15481	aagcagccat	ttcaacaaac	tttactaagg	accaaagtct	gttcaggggac	tgtgctgggc
15541	tctgggaaca	gaactagaga	acacacaagg	ccctgcctca	tggaaacttac	agtccaaaca
15601	cacaagactt	gtcagaatga	gctgtatcaa	gggagcaggg	tgatgtcatg	tccccgtgag
15661	aatgagcctg	ggttagaacc	tgtgttccag	aggagctggc	atagaatctg	aaggtgctgg
15721	gacatgagct	gggggcacag	gtgggggcag	accatgccgg	ggttgtacca	atcttccgca
15781	gaaggagcct	ggacattatt	cttggtgtga	gaagtacagg	gaggggtcca	actgggtgag
15841	ttgatagagt	ctggtgtgtg	cttttttctc	tgagaccatc	tcactctgtc	accaggctg
15901	cgtttagtga	tgcaatcatg	gctcactgta	gccttgatct	cccagctcaa	gccatcctcc
15961	gcctcaggtt	cccgagtagc	atgacatgca	tcaccatgct	tagctatctt	gacttctcgc
16021	tctgtcgccc	aggctggagg	gcagtggcgc	catctcagct	caactgaacc	tctgcctcct
16081	gggttcaacc	aattctcctg	cttcagcctc	ccaagtacgc	gggattacag	gtgcgcccac
16141	acctggctaa	tttttgaat	tttttcccc	actgtgcagg	caagttttgt	cactgctttt
16201	tatttttatt	tcattttact	ttaagttctg	ggatacatgt	gctgaacatg	cagggttgtt
16261	acacaggtat	atatgtgcca	tgggtggttg	ctgcacctat	caaccctgca	tctaggttta
16321	cgcttgaaatg	cattaggtat	ttgtccta	gctctccctc	cccttaacca	ccacacccca
16381	atttttgtat	tttttttagta	gagacgaggt	ttcaccatgt	tggtcaggct	ggtctcaaac
16441	tctgacctc	aagtgatcca	ccgccttgg	cctcccaaag	tgctggaatt	acaggcgtcg
16501	agctgtgccc	ggcttatttt	tttactttt	ctagagatgg	ggtctcacta	gttgcccgag
16561	gctggtctta	aaaactcctg	agcgcaagca	atcctccac	ctcgacctcc	cagagtgtta
16621	ggattacagg	cgtgagactg	caccaagcct	ggtgtgtgtt	ttcttttttc	tttttttttt
16681	tctgagatgg	agtcttgctc	tgtcgcccag	gctggagtg	agtggcgcca	tctcgtctca
16741	ctgcaagctc	cgcctcccag	cttcacacca	ttctcctgcc	tcagcctccc	gagtagctgg
16801	gactacaggt	gcacaccgcc	acgccagct	aactttctgt	attttttagta	gagacaggtt
16861	tcaccgtgtt	agccaggatg	gtctcgatct	cctgaccttg	tgatccgcct	gtttggcct
16921	cccaaagtgc	tgggattaca	ggcgtgagct	actgcgccc	gccacctggt	gtgtgttttc
16981	aaagtgggtg	tggctgctgt	gtggagactg	gactgcaggg	gatgggacag	ggtacagcaa
17041	ttggcagaat	ggcagcccgg	tctagcgggg	tgattttcca	caacgggtgg	gctggaggtt
17101	cctcccaaga	taatgcccag	agtcctgctt	tctctattcc	tctttcgcaa	acatttactg
17161	agcacacttg	tgtgggcttt	ggctaaggcc	aaggagggaa	gataagagt	acacagacag
17221	aaccctgctt	ccaagtagga	aacctgctct	catttgcaaa	atgggcaccc	ttgctgggag
17281	gttgggagag	gtcagtggtg	catgcatgtg	acatggtgtc	tgggctcagt	gcttggcact
17341	cagtaaacct	ctgctgttaa	catggcataa	aaagtaccag	gcagattttc	gtgaagggaat
17401	gccggctgcc	agacaaaaga	ctggggaatg	gtcaggggtc	tgggtaaat	ggcttctgac
17461	cttcataccc	acaagccttg	gttttagggt	caagactcaa	gtttgcctta	gttctcacta
17521	tctagctgct	ggcggctggg	actagaccac	tctgagcctc	actctcccc	tctgtcta
17581	gggctcatcg	ttctgacata	ctggggggcg	gggtacccag	cagcctgggtg	tgtgataagc
17641	tgcccagcat	agcgccagac	acagggtcac	tttgttttct	tttgtgtgct	atttgacatt
17701	tgggctgaag	gaacaggggtg	aacagggtgaa	gggaggtggg	gcaggagtag	aatgagtggt
17761	tgatgggctg	tctgcaggga	agggaaatgg	acccaggtgt	cttgggggag	gcttgcagga
17821	ctccaagctt	tgtgagccc	atcccaggca	gtggcatgac	atggaaggtc	ctctttcaga
17881	tctcagctgt	gtggccttga	gcaagtcagt	tcccctgtct	gcatacctgt	cttttctgta
17941	aaatgggagg	ctaagtgtgc	ctgcctggag	gggtcccagt	ggaggttcat	tgagataatg
18001	cacctgcaag	catccaagag	agggcctggt	ccaccgcgac	aatgccactc	aatgtcacca
18061	tcagtctcct	ttccttgggt	ccctttatcc	tcctctcaca	gcagggaat	gttccaggtt
18121	gtttctatta	ggagagggtg	tggggaagca	cccaagcata	ctcgggaatt	ccatttatcg
18181	agcacctact	agatgccaga	tgttttgaca	taaatatttc	cacggaatcc	acgctctca
18241	acaagagaca	ttattggtcc	cactgtacag	atgaagaagc	tgagactcag	aggtgaaaca
18301	acttgggtcaa	ggactcctgg	caggcaggtc	tgagataaga	gattcatgtt	ttgccccaaa
18361	cttactgggt	ccaaatgtaa	ggccacatta	agccatgata	gtcactgaca	catcggtgca
18421	aaagagttag	ggaggccctt	ctgggaacat	attttgaaag	aggaagtgga	gacagggtta
18481	gatataaagt	cagggacttt	gagcccactc	accaaaggac	ctccctactt	cctgggagct
18541	gtccttttat	gatatgatta	ctgaaggtta	atctttatta	taagccaatg	actgggtcac
18601	acgtgtggct	tatgacctac	ctttaactcc	acttctgaa	agcaacacca	acacaaccaa
18661	cacaaaagtg	gcacaaacac	ggatagtcac	atatcatcat	agctcaccac	agcctcgaac


```
18721 tcttggccac acgtatgaag aagcagctgt tcaaaccac tcagacacag agaccacat
18781 tcacatgtgg accccaagta cacatacaca cccctacatg tgcataaagg ctctcagtca
18841 cctcccctga ccttcccac aggaacacaca catgtaggca agcactcaca atacacgcca
18901 cctttgtaca gtcagacgta caatgatgac aggaaaaaat atccaaccac agattcatgs
18961 tttcacttac tgggttggg gtgggtggca gcaggttggg gacaggcctg ctggagaccc
19021 aaattcagga aatggagaga gacagacaat aaatccagcc agcaagagag tacgtgggtt
19081 ctgaagatga gctgtcttga tactcagaga tttaatttca gtgggtactt aggggtgag
19141 gtgaggtctg ggggaacaatg aggtgcagcc tgtcctgtgg tggggttagc tgcaggctg
19201 tcaactcctgt gggcctgagg gatcaccaag gggaaatgca gtggctcctg gttggggcag
19261 gagtgggaa tggagtgggt cagatgagag ggcagaccct ggtggagatg cccatgtgag
19321 ctatgattcg aaaggaaaaa catctcaaac cctgcagcca cacagaccca gcttcaawwc
19381 ccagctctcc cattccctcg ctgggtgacc ccaggactat tccttaatat ctctgagtct
19441 caggtgcgtc tcacactttg taaagagaac cgaggaggcc atgctgttca ctgtgcatc
19501 tccgggactt agcacagtgc ctggccaata ttaggagtgc agtaagtatt tgttgaataa
19561 atgaaagaag aagcaggcat taaagcaaca atgagaagcc accacttacc aaatcatcaa
19621 ataggcaaaa tggaaaaagt aagataattg gtgaaggcat ggggaaacat tgttgaatgc
19681 ttttgccag aaggtaaatg tgcacagcac gctggcaggt gactgggtgg cacctatgaa
19741 cattcaaacy gtaagaacgg tttatcacat gtgtgccaag aggtgtaca gggaggtgca
19801 gggcacgctg tttgcaagag caaaaataca acctatgtgt ccaccaccg gggcggcta
19861 aatgaacata cgctgaggag tatcatgcag ttcttaagga gcatgggtc gatctatg
19921 tgatctagcc agattgccag agtatctgtt ggggtgaaag tgcaagatgg agaaagacat
19981 gacattgata gagggaaagt cctacacaaa ggaatactat tttttttttt taaataattg
20041 ggggtcttgc ctgtcacctc ggctggagtg cagtggcaca atcatagctc accacagcct
20101 cgaactgacc acaagtgate ctcccagctc gacctcccaa agcgctagga ttacaggcat
20161 gagccaccac acctggccaa ggaacataat ttttatgggt caaaatacaa caatgtagat
20221 gcatagaaaa agatccaggg tgggagcagt gcttatgcct ataactctag cgctttgca
20281 ggcccacgcy ggaggatcac ttgaagccag gaggttgaga ccagcctagg aaacaaagtg
20341 agactctgtc tccctaaaaa tgaaaaaatt agctgggcat ggcaatgcyt gccacctaca
20401 tgggaagctg agtcaggagg attgcttgag cacagtgggg gtgggggtgg ggtgtcaagg
20461 ctgcagtgag ctgtgttcac gccactgcac cccagcctga gtgacagagg gagaccaggt
20521 atcaaaaaat aaaaaataaa ataaaaaaga tcccaaagaa cagaccaagc tgggtgcctg
20581 gttacctaga gggaggaaaa ttgaaggaaa aagaggataa aaaaggaatg agcatcagt
20641 aatgtgtcta atgggtgtct agcgaagctc tgttgaatct ggagaggcag taaaggcatg
20701 tggatataac atcagccctt gctctgggtt tgtgtgtttg ggcaaggtga cccagaacgc
20761 tctccacag agggactcat tactccaggg caggcagagg tccagtcag cctctcctt
20821 tctccagag gagtctctc ctagaagcca ctagggtgtc cttggggtgt ccggtctacc
20881 tttggctcca gctctgtccc agggcctcac attcttgtca tctctgccc ggaatgttct
20941 tccctcgtt cccttgggtg aggtcttttt tttttttttt tttttttttt ttgagacagg
21001 gtctccctaa gtcacccggg ctggagtga gtggtgtgat ctcatctcac tgccatctct
21061 gtcttccgag ctcaagtgat cctccacctt gaggctcca agtagcagg accacaggta
21121 tgtgtacca tgcccaacta attttttcat attttttag agatggggtt ttgtcatgt
21181 gcccaggctg gtcttgaact cctgaactca agtgatgtc actctttttt tttttgagat
21241 ggagtcttgc tctgtgccc aggtgcagt gcagtggcg catctctgtt cactgcaagc
21301 tccgctcct gggttcacgc cattctccg cctcagcct ccaagtagct gggactacag
21361 ggcgccacca ccacgcccgg ctaatttttt gtatttttag tagagacggc gtttcaccgt
21421 gttagccagg atggtctcca tctcctgacc tctgtatctg cctgctcca cctcccaaag
21481 tgctgggatt acaggcgtga gccactgcgc ccggcgtga tgcactctt ttacaactcg
21541 gttgagggtt accctcctt gagcctgttc agggcactgc caattgggcc caatgacgt
21601 gggcttccca catcgtgcat gggaggagac tgcgtgct ctgtgtgccc tgagaccaga
21661 cgctcctca gagagaactg ggccctatc tacctctcat tgcgataccc gacattctca
21721 acagcatcac cacagtgagg gcccatggac atgaggaatc ttcctgccc acactctaac
21781 gtccccagcc tgcgtcgtgc tagctcttgt gcctagtttc atagtttctg caagttcttt
21841 gccccctatg tcaccgctac tggctcttgc tgtcagctgc tgacacctaa ttgtcactt
21901 atggggtggg gtgggtggg tagaaacctg ttaggcttgt tggaaataatg tgcaaaatg
21961 gagtgaatag gccacgacaa agatcccaag ggatttactg aggaacaggc actgcgttct
22021 ccaggctcgg gctttgtgag agttctctgg accactggat tcagtcaact tgctgaagc
22081 cacacagctg atggggaggg gagctgggac tgggaagcagg tgtgtctgga cccctccacc
22141 agcattccta gaattctact ttcttgcctc tctattttgc agctgttaac gaaacaatct
22201 tgactgcttt ctgaaagcca gtgactact actactcaa gtaacagctg acttcacctc
22261 tctcttcttc acctgtgctt gctagaagag tctcatcaag tctccaggac tggcgccact
22321 ttggagttag ccactgctca tgccatcgtt cctggcctct cacaccttct ccttgactcg
22381 ggtcctctga gctcacacc ctctaccgct cactgagaca cacaatcgtt cctgtgggtg
22441 gagcagaaag gatctactcc aaacatcaaa gcaacctctc ccgacagagg acttcaggcc
22501 aggttctgcc aagccccagg gctcccaaaa acaccttcac caagttccac cagttccctg
22561 aattgtgctc tctcatctg atcaagggaa acacataatt tccattcaca ggacctggg
22621 aaagtgtcca aggccactac tacagctcat cgtggctaaa gccagcagct ggggaaggtca
22681 gcagctagaa ggttctttcc acactcagtc ctatgctgtc gcttgggctg gatggctgg
22741 catgcactca gggcaaaatc aaagccctgc cacagcccag caaggcctg ctgatggatc
```

```
22801 agaccctgcc aaccctatg cctcaccctc acaccacccc ctggctcgct ataccaactc
22861 tcctttccta tcctcaagca cccccaccac agggcctttg cactggctgt tctcgccacc
22921 tggggtcttc atcccacttt tagaaagacg tcagtgtctaa tgtcaccacc tccaagaggc
22981 tttccctaac ttccttatct caccttacia acaccagtc acccctttct ctctgtttct
23041 ttcccacata gcaccagta tggctctgcac tgatgggtgtg aattcactga cccccctagg
23101 tctgcctgaa gacctctgag tccccgtctg cctggcacac agtaagaact cagtaaatat
23161 ctgctgaata aatactgaag aagtgaataa gatatgttat tatcccatct tgcaaatatg
23221 gaaactgagg cacagaaaag ctaagaagct ggcccaggcc acatacttat gaaatgacc
23281 atttaaattc agaccagcgg tcagcagaat ccacactgtg agccccactg ctcggggttc
23341 ccaggggcac agactcccat gggaaccttc ccgacacatg ggttagagga aaagcagggc
23401 tgaggaattc cggggcagag gcagtttcac gattacacac cctggccagg agctactttt
23461 cccagcaagg cgccaccaa ggcggaaaga gaaactgaaa agctaagtgc cataagccac
23521 caggatcttg acttccccag atgctggctg ggccctcaca tttggggtac gaggatctgc
23581 caagataggg aggagaatgt ttccacacat ctggctgtgg ctgtggttta gtaagtctg
23641 gatatagggc tggctcatctg ccctgtgaca agaggtcatt gtgccaaagca ccgactccat
23701 gcctggcatt ttgcccttgg tctgcatgtc tgtctgctct gtgaggtacg agatgtccag
23761 agatcacttt gcagttgggg caaatgaggt ccaagaggac aggtcacttg ccaaggtcat
23821 gcagcaggtc tggggtcaga gcctggctcc atcctaccga gcactctgag cccctcaggt
23881 ttcgcactgc ctggcttcct gtgagcctgg tgcccagccc tccaggagaa cagcccacaa
23941 ggtgatgctt gtcaaccagc agattttcct ttctcttttc ggcatctgga tttggtttca
24001 ttttgaacac aggacttcag aaaatgaaac caaagctgtc tgtcactggg ggcagtgagg
24061 agaaccacg tgtgctgagt gtacctttag aagctttcct gctcccttgc tgtgcttcc
24121 ctggcctgtg gtccctggac tagggcttca aacatagata taaggcagtg ctttgggaag
24181 ccagggcagg agggtcacta aaggacagga gttcgagacc agcctgggca acgtagttag
24241 accccatccc tacaaaaatt taaaaattag ccgggtgtgg tggcatgtgc ttagtctca
24301 gctaccagga ggctgagatg ggagaaatctc ttgagccag gaggtcgagg ctatagtcc
24361 tcctcgatcc tatcactaca ctccagcctg agcaacagag caacactcca tctctttaa
24421 aaaatggaca caggggttga agccatgcgt ctgtgggctc caacacactg ccacaccac
24481 aggcaccctc agatgaacaa caaacatcta ccgactgctt attagacact acgggctgtt
24541 ttaagcacct gacccataat cactcattta attcccatac aaccocggga tggaggtact
24601 ttttttttat ttttttttga gacagggtct tagtctgttg cccaggctgg agtgagtg
24661 cacaatcgtg gctcactgca gccttgacct ctggggtca ggcaatcctc ctgctcagc
24721 ctcccaagta gctgggactg caggtgcaat ccactacgac tggctgattt ttgtactatt
24781 tttttttttt tttttttttt tttttagag aggggtctc actttgttgc ccaggctgtt
24841 ctcaaactcc tgggctcaag caatcctcct gtcttggcct tccaagtgt gggattatag
24901 gcatgagcta ctgcccctgc tagaggtact attattatcc catttcacag ataaagaaac
24961 catggcagag aggttaatta catgctcaag gtcacaagaa tagaaagggt cagatttgga
25021 actgggtctc cttgtattcc atcacctcc acagagtgtg gcctccagca gctttcagt
25081 ggacatctct cgaatgatca cacacctgac ctctggtgca ggcaaggttc tgcattctct
25141 ctacccccc caccgacgcg caccgacaca caccgacaac ctaggaggct acaccaatga
25201 ccaccaccag ccctggccac atgcagattc agggcactga tggggtgcta agctgggctg
25261 attctgggct actccctgtg ttcaggaggt taataaggac ctagtctgc ctggggaag
25321 agggagggga gggccaggga gggcggaagg gactgggcac cagggtctcc aggagagaag
25381 ccgtctgaga gctgtctgta gagggcagtg tgtcccagtg tgaggccagt aaccaagtc
25441 ccagcctagc cagggtttta tgtggccct tgtgatgtg gggctcctca catgccttca
25501 ttcaaaaata caccgagcag ccaggcacct actccatggc ctgcacgac aatcggaatc
25561 actaaatcac aaacacgtgt gcaaattaca gccccgacca ccgaccgccc accatcccaa
25621 gcccggcccg tgtgtgtggt ggggaaggcag tctttgaagg gcagatgctg accggagcagt
25681 agggagggga aatctatgag gaagggtctg ggggagagga aggttaggaa accaggtttg
25741 gggattcatc acgtctgaga atgcaccatt ttttactgg gctccaattt gatgtcgtc
25801 agctgcacct ctccccaaaa tgaagacggg gaaggcgaga tccaggtcca gagctcccaa
25861 tctgcaagcc attgcaaatc ccagccctc cccagcctca gtttcttccg cagccgggta
25921 gtgggagcgc agggagggca gtcagggcca ccagggaact tgcccggccc cgccagttt
25981 ccgagggaact gggccggggg ggaggccccc gcgcgcccag gggttcctct gaagcctgtg
26041 gtcaggccgc cgcttcccgg gaagcccgag ccaagaccag agaccgccc cgccggggc
26101 ttcgggacag cagggcgggc gactgagggc gtcgacggcg ggtggagcag gggctaggag
26161 ggggtctacg ggtggggtca ggctcagggt tggggacacc ttctgtggcc tctaggggg
26221 atctggctgc aggggaggag agggacaggg tctgcccccg gcgggtgtgg agacagctgg
26281 ggcgaggag ggtgtgtcag ggcgctccc aagagggcct ggcggcagaa agtggaaacc
26341 gaggtagcgg ggcaaatcg gggctgccaa gtccgaagga ggggtccgag aagtggccg
26401 aagcgcaggg tcggggccag agccctcgag aggcgggtgc tggggcaggt ggcgaacgg
26461 gggcagaggg ccgcggggag ggtccagaag agagggaaac agggccgaag cggctctgc
26521 cggacgccac cgcggaaaga gaaacaaaaa gtggagctgg gcggggccgg cagggcgggg
26581 cctcccgccg tcgccagccc cgcctccgag ccggtttaaa agactggcgc agggcgggc
26641 gccagacaga gcgagctgcg ccggtggcag ctgcacggct cctggccccg gagcatgcg
26701 gagagcgccc ccggagcgcc ccgcgctccc gcccgcgctg gcccgcgccc ccgcgccc
26761 gccgccaggt gagccggggc ctgggcgagg aggcgggagg gaggaggag gggagtccag
26821 ggcagccagg agtcgggcga gcctcggggg ctgcaggatg gggctcgccc cgcgatgcc
```

```
26881 ctgaccctcg ccggcccccac ccaggcgccg ccccgcgcg cggggtcccc cagcacagcc
26941 tttctccggc cctagcccaa atcgcccaga ccaggcgcg atcccagcct ggccagcagg
27001 cggcgggcgc gggcgggcga gccggggcgc gacggctgga gccagaaccg gctgctctcc
27061 acgccccctt ctcggtgctg cccggaggcc ggactccgcc tccaccgagc cccacccgc
27121 cgggaagagc tccgcggagt acagagccca tttctagct gtgtccactg aggctgaacg
27181 gatccgcgcg gacttggtgc tccgtgctcg cccctaggg ccgggtccgc cgggagcgcc
27241 gccctccgga gttgtccggc cgggtgcacac ctgcccggcc ccgcagcgcc ccagctcacc
27301 gctttgtctc tcccgcagcg cacccccgga cgctatggcc caccctccg gctggcccct
27361 tctgtaggat ggtagcacac aaccagggtg caggcgacaa tgcagtctcc acagcagcag
27421 agccccgacg gcggccagaa ccttctctct ctctctctc ctgcccgcg ggccccgcgc
27481 gcccgcgccc gtgcccgcg gtcccggccc cggcccccg cgacacgcac ttccgcacat
27541 tccgttcgca cgcgattac cggcgcatca cgcgcgccag cgcgctcctg gacgcctgcg
27601 gattctactg ggggcccctg agcgtgcacg gggcgcacga gcggctgcgc gccgagcccg
27661 tgggcacctt cctggtgcgc gacagccgcc agcggaactg ctttttcgcc cttagcgtga
27721 agatggcctc gggaccacg agcatccgcg tgcactttca ggccggccgc ttccacctgg
27781 atggcagccg cgagagcttc gactgcctct tcgagctgct ggagcactac gtggcggcgc
27841 cgcgccgcat gctgggggcc ccgctgcgcc agcgcgcgt gcggccgctg caggagctgt
27901 tccgccagcg catcgtggcc accgtgggcc gcgagaacct ggctcgcatc cccctcaacc
27961 ccgtctccg cgactacctg agctccttcc ccttcagat ttgaccgga gcgccgcgc
28021 tgcacgcagc attaaactgg atgccgtgtt atttgttat tacttgctg gaaccatgtg
28081 ggtaccctcc ccggcctggg ttggaggag cggatgggtg tagggcgaa gcgcctcccg
28141 ccctcggctg gagacgaggc cgcagacccc ttctacctc ttgaggggt cctccccctc
28201 ctggtgctcc ctctgggtcc ccctggttgt tgtagcagct taactgtatc tggagccagg
28261 acctgaactc gcacctccta cctcttcctg tttacatata ccagtatct ttgcacaaac
28321 caggggttgg gggagggtct ctggctttat tttctgctg tgcagaatcc tattttatat
28381 tttttaaagt cagtttaggt aataaacttt attatgaaag tttttttttt aaaaaaaaaa
28441 taagttttct agcgagtgtg ctttgccca aagtttaact tggttctgaa cagggtccagg
28501 ggagagggtc ctaaggctga cctgctgggc tgcag
```

//

Revised: July 5, 2002.

Disclaimer | Write to the Help Desk
NCBI | NLM | NIH